BRUHAT BANAGLORE MAHANAGARA PALIKE

Executive Engineer-Yelhanka Division

Detailed Estimate

Name of Work:Improvements to roads ,drains at Sharadanagara ,1st main and 2nd main ,Mathrulayout,1st cross ,4th cross and 5th cross in ward no 04

Estimate Amount : 5000000.00

Sl. No	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	CIVIL WORKS								
1	**Removing BS Slab** of drain and Stacking **(Page No 25., I.No.5.32 of KPWD S.R 2015-16).**								
		Sqm							
	Existing Cover slab								
	1st cross road								
	Ch: (0 - 212)	L/s	1	212	0.90		190.80		
	Deuction for Cross roads (39-31) = 8		-1	8	1.20		-9.60		
	Ch: (0 - 212)	R/s	1	212	1.20		254.40		
	2nd cross								
	Ch: (0 - 236)	L/s	1	236	0.90		212.40		
	Ch: (0 - 236)	R/s	1	236	0.90		212.40		
	4th cross								
	Ch: (0 - 248)	L/s	1	248	0.90		223.20		
	Ch: (0 - 248)	R/s	1	248	0.90		223.20		
	6th cross								
	Ch: (0 - 268)	L/s	1	268	0.90		241.20		
	Deuction for Missing length 20 = 20)		-1	20	0.90		-18.00		
	Ch: (0 - 268)	R/s	1	268	0.90		241.20		
	2nd main road								
	Ch: (0 - 196)	L/s	1	196	0.90		176.40		
	Deuction for Cross roads (31-21)+(168-164) = 14)		-1	14	0.90		-12.60		
	Ch: (0 - 196)	R/s	1	196	0.90		176.40		
	Deuction for Cross roads (66-60)+(120-114) = 12)		-1	12	0.90		-10.80		
	4th main								
	Ch: (0 - 38)	L/s	1	38	0.90		34.20		
	Ch: (0 - 38)	R/s	1	38	0.90		34.20		
							2169.00	**63.72**	**138208.68**
2	**Refixing Stone Slabs** of drains and Pointing in C.M(1:3) **(Page No 25., I.No.5.33 of KPWD S.R 2015-16).**								
		Sqm							
	Existing Cover slab								
	1st cross road								
	Ch: (0 - 212)	L/s	1	212	0.90		190.80		
	Deuction for Cross roads (39-31) = 8)		-1	8	1.20		-9.60		
	Ch: (0 - 212)	R/s	1	212	1.20		254.40		
	2nd cross								
	Ch: (0 - 236)	L/s	1	236	0.90		212.40		
	Ch: (0 - 236)	R/s	1	236	0.90		212.40		

Sl. No	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	4th cross								
	Ch: (0 - 248)	L/s	1	248	0.90		223.20		
	Ch: (0 - 248)	R/s	1	248	0.90		223.20		
	6th cross								
	Ch: (0 - 268)	L/s	1	268	0.90		241.20		
	Deuction for Missing length 20 = 20)		-1	20	0.90		-18.00		
	Ch: (0 - 268)	R/s	1	268	0.90		241.20		
	2nd main road								
	Ch: (0 - 196)	L/s	1	196	0.90		176.40		
	Deuction for Cross roads (31-21)+(168-164) = 14)		-1	14	0.90		-12.60		
	Ch: (0 - 196)	R/s	1	196	0.90		176.40		
	Deuction for Cross roads (66-60)+(120-114) = 12)		-1	12	0.90		-10.80		
	4th main								
	Ch: (0 - 38)	L/s	1	38	0.90		34.20		
	Ch: (0 - 38)	R/s	1	38	0.90		34.20		
							2169.00		
	Deduction for damaged 20%						**-433.80**		
							1735.20	**78.84**	**136803.17**
3	Providing precast slab of **100 mm thick** including cost of all materials, labour, curing,transportation,loading ,unloading,etc.,complete as per the direction of engineer in charge- **Data rate**								
		Sqm							
	New Slabs								
	6th cross								
	Ch: (0 - 268)	L/s	1	20	0.90		**18.00**		
	for damaged 20%						**433.80**		
							451.80	**1834.00**	**828601.20**
4	KSRRB 300-1. **Earthwork excavation by manual means** in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 1.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 **(Page No141., I.No.19.1 of KPWD S.R 2015-16).**								
		Cum							
	Desilting								
	1st cross road								
	Ch: (0 - 212)	L/s	1	212	0.60	0.700	89.04		
	Ch: (0 - 212)	R/s	1	212	0.60	0.700	89.04		
	2nd cross								
	Ch: (0 - 236)	L/s	1	236	0.60	0.700	99.12		
	Ch: (0 - 236)	R/s	1	236	0.60	0.700	99.12		
	4th cross								
	Ch: (0 - 248)	L/s	1	248	0.60	0.700	104.16		
	Ch: (0 - 248)	R/s	1	248	0.60	0.700	104.16		
	6th cross								
	Ch: (0 - 268)	L/s	1	268	0.60	0.700	112.56		

Sl. No	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Ch: (0 - 268)	R/s	1	268	0.60	0.700	112.56		
	2nd main road								
	Ch: (0 - 196)	L/s	1	196	0.60	0.700	82.32		
	Ch: (0 - 196)	R/s	1	196	0.60	0.700	82.32		
	4th main								
	Ch: (0 - 38)	L/s	1	38	0.60	0.700	15.96		
	Ch: (0 - 38)	R/s	1	38	0.60	0.700	15.96		
	Deduction for culvert		-4	8	1.50	0.800	-38.40		
	New Culverts								
			4	8	1.50	0.900	43.20		
							1011.12	**177.88**	**179858.03**
5	**KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix1:3:6** with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregtes @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted,in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications.Specification No. KBS 4.1, 4.2 **(Page No 12., I.No.4.2 of KPWD S.R 2015-16).**								
		Cum							
	New Culverts								
			4	8	1.50	0.100	4.80		
							4.80	**5236.92**	**25137.22**
6	**KSRB 5.2-3. Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6,** stone hammered dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 **(Page No 23., I.No.5.6 of KPWD S.R 2015-16).**								
		Cum							
	New Culverts								
			8	8	0.45	0.850	24.48		
							24.48	**4135.32**	**101232.63**
7	**1 KSRB 15.1.1 Providing flush pointing** to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. **(Page No 112., I.No.15.1 of KPWD S.R 2015-16).**								
		Sqm							
	New Culverts								
			8	8		0.850	54.40		
							54.40	**99.36**	**5405.18**
8	**KSRB 4-1.6 ;** Providing and laying in position plain cement concrete of mix **1:2:4 with cement @ 240kgs, with 20mm** and down size graded granite metal coarse aggregates @0.878cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation,plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 **(Page No 12., I.No.4.6 of KPWD S.R 2015-16).**								
		Sqm							
	New Culverts-Coping								
			8	8	0.45	0.075	2.16		
							2.16	**5490.72**	**11859.96**

Sl. No	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
9	**Providing precast slab of 250mm thick** including cost of all materials, labour, curing,transportation,loading ,unloading,etc.,complete as per the direction of engineer in charge- Data rate								
		Sqm							
	New Culverts								
			4	8	1.50		48.00		
							48.00	**5111.00**	**245328.00**
10	Removing and resetting of kerb stones **(Page No 258., I.No.37.57 of KPWD S.R 2015-16).**								
		m							
	1st cross road								
	Ch: (0 - 212)	L/s	1	212			212.00		
	Deuction for Cross roads (39-31) = 8)		-1	8			-8.00		
	Ch: (0 - 212)	R/s	1	212			212.00		
							416.00		
	Deduction for damaged 30%						**-124.80**		
							291.20	**63.72**	**18555.26**
11	Providing and fixing **pre cast solid cement concrete kerb stones** made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including formwork,curing,including cost of all materials, labour, hire charges of machinery, loading,unloading, lead and lift, transportation etc., complete. **(Page No 25., I.No.5.30 of KPWD S.R 2015-16).**								
		Nos							
	1st cross road								
	For Damaged portion		1	124.8			277.00		
							277.00	**320.76**	**88850.52**

Sl. No	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	ROAD WORKS								
12	KSRRB M300-14. **Excavation for roadwork in all type of soil with hydraulic excavator** of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 **(Page No 142., I.No.19.14 of KPWD S.R 2015-16).**								
		Cum							
	Road cutting								
	4th main								
	Ch: (0 - 38)		1	38	1.00	0.375	14.25		
							14.25	**143.32**	**2042.31**
13	KSRRB 300-58. **Compaction of original ground** with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 **(Page No 148., I.No.19.64 of KPWD S.R 2015-16).**								
		Sqm							
	Road cutting								
	4th main								
	Ch: (0 - 38)		1	38	1.00		38.00		
							38.00	**4.86**	**184.68**
14	KSRRB M400-6.1. Construction of **granular sub-base** by providing close graded material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications. A. Plant Mix Method.Close graded granular sub-base material as per 400-1 For Grading- II Material **(Page No 154., I.No.20.4.2 of KPWD S.R 2015-16).**								
		Cum							
	Road cutting								
	4th main								
	Ch: (0 - 38)		1	38	1.00	0.150	5.70		
							5.70	**1622.16**	**9246.31**
15	KSRRB M400-17. Providing, laying, spreading and compacting graded stones aggregate to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 **(Page No 157., I.No.20.18 of KPWD S.R 2015-16).**								
		Cum							
	Road cutting								
	4th main								
	Ch: (0 - 38)		1	38	1.00	0.250	9.50		
							9.50	**1713.96**	**16282.62**
16	KSRRB M500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WBM,WMM ,including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per Specifications. MORTH Specification No. 502 **(Page No 160., I.No.21.6 of KPWD S.R 2015-16).**								
		Sqm							
	Road cutting								
	4th main								
	Ch: (0 - 38)		1	38	1.00		38.00		
							38.00	**32.40**	**1231.20**

Sl. No	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
17	KSRRB 500-2. **Cleaning the existing black topped** surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH / Chapter 5**(Page No 160., I.No.21.2 of KPWD S.R 2015-16).**								
		Sqm							
	1st cross road								
	Ch: (0 - 212)		1	212	6.00		1272.00		
	2nd cross								
	Ch: (0 - 236)		1	236	4.50		1062.00		
	4th cross								
	Ch: (0 - 120)		1	120	3.50		420.00		
	Ch: (120 - 248)		1	128	5.50		704.00		
	6th cross								
	Ch: (0 - 268)		1	268	5.50		1474.00		
	2nd main road								
	Ch: (0 - 196)		1	196	5.70		1117.20		
	4th main								
	Ch: (0 - 38)		1	38	3.80		144.40		
							6193.60	**3.24**	**20067.26**
18	KSRRB 500-7. Providing and applying **tack coat** using 80/100 grade Bitumen (VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm , heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH/Chapter 5 **(Page No 160., I.No.21.7 of KPWD S.R 2015-16).**								
		Sqm							
	1st cross road								
	Ch: (0 - 212)		1	212	6.00		1272.00		
	2nd cross								
	Ch: (0 - 236)		1	236	4.50		1062.00		
	4th cross								
	Ch: (0 - 120)		1	120	3.50		420.00		
	Ch: (120 - 248)		1	128	5.50		704.00		
	6th cross								
	Ch: (0 - 268)		1	268	5.50		1474.00		
	2nd main road								
	Ch: (0 - 196)		1	196	5.70		1117.20		
	4th main								
	Ch: (0 - 38)		1	38	3.80		144.40		
							6193.60	**15.12**	**93647.23**
19	KSRRB M500- 15. Providing, laying **dense graded bituminous macadam** using 40/60 THP capacity H.M.P with Mechanical paver Gr-II(50mm to 75mm), crushed aggregates of specified grading premixed with 4.5% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying to the required level and grade, rolling with wheeled , vibratory and tandeem rollers to achieve the desired density including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.507 **(Page No 161., I.No.21.17.6 of KPWD S.R 2015-16).**								
		Cum							
	Road cutting								
	4th main								
	Ch: (0 - 38)		1	38	1.00	0.050	1.90		
	Profile correction								
	1st cross road								
	Ch: (0 - 212)		1	20	2.00	0.050	2.00		

Sl. No	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	2nd cross								
	Ch: (0 - 236)		1	25	1.50	0.050	1.88		
	4th cross								
	Ch: (0 - 120)		1	30	2.00	0.050	3.00		
	Ch: (120 - 248)		1	30	2.00	0.050	3.00		
	6th cross								
	Ch: (0 - 268)		1	40	1.50	0.050	3.00		
	2nd main road								
	Ch: (0 - 196)		1	45	2.00	0.050	4.50		
	4th main								
	Ch: (0 - 38)		1	10	1.00	0.050	0.50		
							19.78	**7927.20**	**156760.38**
20	KSRRB M500- 15. Providing, laying **bituminousConcrete** using **40/60 THP** capacity H.M.P with Mechanical paver Gr-II(30mm to 45mm), crushed aggregates of specified grading premixed with 6% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying to the required level and grade, rolling with wheeled , vibratory and tandeem rollers to achieve the desired density including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.509 **(Page No 164., I.No.21.22.6 of KPWD S.R 2015-16).**								
		Cum							
	1st cross road								
	Ch: (0 - 212)		1	212	6.00	0.040	50.88		
	2nd cross								
	Ch: (0 - 236)		1	236	4.50	0.040	42.48		
	4th cross								
	Ch: (0 - 120)		1	120	3.50	0.040	16.80		
	Ch: (120 - 248)		1	128	5.50	0.040	28.16		
	6th cross								
	Ch: (0 - 268)		1	268	5.50	0.040	58.96		
	2nd main road								
	Ch: (0 - 196)		1	196	5.70	0.040	44.69		
	4th main								
	Ch: (0 - 38)		1	38	3.80	0.040	5.78		
							247.74	**9822.60**	**2433490.21**
	ROAD FURNITURES								
21	KSRRB 800-1. **Painting two coats** after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8**(Page No 179, I.No.24.1 of KPWD S.R 2015-16).**								
	Kerb Painting	**Sqm**							
	1st cross road								
	Ch: (0 - 212)	L/s	1	212		0.300	63.60		
	Deuction for Cross roads (39-31) = 8)		-1	8		0.300	-2.40		
	Ch: (0 - 212)	R/s	1	212		0.300	63.60		
							124.80	**61.56**	**7682.69**
22	KSRRB M800-13. Providing and laying of **hot applied thermoplastic compound** 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 **(Page No 181., I.No.24.15 of KPWD S.R 2015-16).**								

Sl. No	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Road marking	Sqm							
	1st cross road								
	Ch: (0 - 212)		2.5	212	0.15		79.50		
	2nd cross								
	Ch: (0 - 236)		2.5	236	0.15		88.50		
	4th cross								
	Ch: (0 - 120)		2.5	120	0.15		45.00		
	Ch: (120 - 248)		2.5	128	0.15		48.00		
	6th cross								
	Ch: (0 - 268)		2.5	268	0.15		100.50		
	2nd main road								
	Ch: (0 - 196)		2.5	196	0.15		73.50		
	4th main								
	Ch: (0 - 38)		2.5	38	0.15		14.25		
							449.25	**473.04**	**212513.22**
	Sub Total								**4732987.95**
23	Cost towards Design Report and Detailed Estimate,PMC/Third party								**47329.88**
24	**Cost of Plastic@ 8% of bitumen qty for BC**	**Kg**	1	2794.55				**27.00**	**75452.91**
25	Cost towards DLP and contigencies								**141989.64**
26	Miscllenous and other charges								**2239.62**
	Grand Total								**5000000.00**

Certificate:-

1. That the workspot inspected by me and found work is necessary.
2. That the area comes with in the Bruhat Bangalore Mahanagara Palike Limits.
3. That the rates are adopted based on the PWD SR of 2015-16
4. That the provisions made in the estimate are necessary and quite essential.

Consultant:

For M/s MECADEZ CORE TECHNOLOGIES PVT LTD

Asst. Engineer
Ward No-04
BBMP

AEE
Yelhanka Sub Division
BBMP

Executive Engineer
Yelhanka Division
BBMP